Abstract In this paper, I propose a novel theoretical framework that defines time not as a fundamental dimension, but as a physical quantity derived from the interaction between quantum frequency and entropy. By introducing the equation t · v = S / k_B, I demonstrate that the flow of time is proportional to the accumulation of entropy relative to the quantum vibration frequency. This approach offers a potential resolution to the "Problem of Time" in quantum gravity and provides a consistent explanation for time dilation in extreme gravitational environments such as black holes.

1. Introduction The nature of time remains one of the greatest unsolved mysteries in physics. While general relativity treats time as a geometric dimension, quantum mechanics treats it as a fixed background parameter. This discrepancy leads to the "Problem of Time." I propose that time is an emergent property arising from quantum states.

2. Theoretical Framework I postulate that time (t) is generated by the vibration of quantum particles (v) resulting in an increase in entropy (S). The relationship is defined as:

$t = S / (k_B \cdot v)$

Where:

- **t is Time.**
- **S is Entropy (J/K).**
- **k_B is the Boltzmann constant (1.38 × 10^-23 J/K).**
- **v is the Frequency of the quantum state (Hz).**

3. Conclusion This formula implies that in the absence of quantum vibration or entropy change, time ceases to exist. This aligns with the thermodynamic arrow of time and offers a new perspective on the unification of quantum mechanics and general relativity.